Amendment to the Claims

Kindly amend claims 1, 4-6, 8, 18, 21-28, 30, 40, 43-44, 47, 48, 51-54 56, 66, and 69-70, as set forth below. In compliance with the Revised Amendment Format published in the Official Gazette on February 25, 2003, a complete listing of claims is provided herein. The changes in the amended claims are shown by strikethrough (for deleted matter) and underlining (for added matter).

1.   (Currently Amended) A method of providing ordered lists of service addresses, said method comprising:

creating an ordered list of service addresses to be used by a client node of a computing environment to reach a service of said computing environment, said creating using a predefined equation to order a plurality of service addresses having the same ordering criterion, said predefined equation balancing use of said plurality of service addresses among said client node and at least one other client node of said computing environment; and

using said ordered list by said client node to reach said service, wherein said ordered list is ordered specifically for said client node based on one or more characteristics of said client node.

2.   (Canceled)

3.   (Canceled)

4.   (Currently Amended) The method of claim 1, wherein said ordering criterion comprises distance from said client node to a plurality of servers corresponding to said plurality of service addresses.

5.   (Currently Amended) The method of claim 1, wherein said predefined equation is based at least in part on the number of said plurality of service addresses having the same ordering criterion and a node number of said <u>client</u> node.

6.   (Currently Amended) The method of claim 1, wherein said creating comprises ordering said service addresses based on distance from the <u>client</u> node to servers of said service addresses.

7.   (Previously Presented) The method of claim 6, wherein said ordering based on distance comprises ordering based on lowest distance.

8.   (Currently Amended) ~~The method of claim 1,~~ <u>A method of providing ordered lists of service addresses, said method comprising:</u>

<u>creating an ordered list of service addresses to be used by a node of a computing environment to reach a service of said computing environment, said creating using a predefined equation to order a plurality of service addresses having the same ordering criterion, said predefined equation balancing use of said plurality of service addresses among said node and at least one other node of said computing environment, and</u> ~~wherein~~ said predefined equation ~~comprises~~ <u>comprising</u>:

[((a number of said node)mod(number of said plurality of service addresses having the same ordering criterion)+k)mod(number of said plurality of service addresses having the same ordering criterion)], wherein mod is an integer remainder of a division operation, and k is set to a selected value<u>; and</u>

<u>using said ordered list by said node to reach said service, wherein said ordered list is ordered specifically for said node.</u>

9. (Previously Presented) The method of claim 8, wherein said predefined equation is computed a number of times, said number of times being equal to the number of said plurality of service addresses, and wherein k is incremented for each computation.

10. (Previously Presented) The method of claim 8, wherein said same ordering criterion comprises equidistance from said node to a plurality of servers corresponding to said plurality of service addresses.

11. (Previously Presented) The method of claim 10, wherein said creating further comprises ordering said service addresses based on distance from the node to servers of said service addresses.

12. (Previously Presented) The method of claim 1, wherein said service comprises a system registry service.

13. (Previously Presented) The method of claim 1, wherein said creating is performed by a distributed configuration manager of said computing environment.

14. (Previously Presented) The method of claim 13, wherein said distributed configuration manager provides said ordered list to one or more nodes of said computing environment.

15. (Previously Presented) The method of claim 1, further comprising maintaining said ordered list.

16. (Previously Presented) The method of claim 15, wherein said maintaining comprises updating said ordered list in response to a change in the service addresses of said list.

17.   (Previously Presented) The method of claim 16, wherein said maintaining is performed by at least one distributed configuration manager of said computing environment.

18.   (Currently Amended) A method of providing ordered lists of service addresses, said method comprising:

ordering a list of a plurality of service addresses according to an ordering criterion, said ordered list being ordered for a specific client node based on one or more characteristics of the client node; and

for at least one set of service addresses of said plurality of service addresses having a same value for the ordering criterion, selecting an order for the service addresses of the set, said selecting being based at least in part on workload distribution.

19.   (Previously Presented) The method of claim 18, wherein said selecting comprises:

indexing the service addresses of the set in a chosen order providing a set of indices corresponding to the service addresses of the set; and

determining an order for the plurality of indices, said order to represent the order of the service addresses of the set.

20.   (Previously Presented) The method of claim 19, wherein the chosen order is ascending order of service addresses.

21.   (Currently Amended) The method of claim 19, wherein said determining comprises using an equation to determine the order, said equation being based at least in part on the number of said service addresses of said set and a node number of the specific client node.

22.   (Currently Amended) ~~The method of claim 21,~~ A method of providing ordered lists of service addresses, said method comprising:

        ordering a list of a plurality of service addresses according to an ordering criterion, said ordered list being ordered for a specific node; and

        for at least one set of service addresses of said plurality of service addresses having a same value for the ordering criterion, selecting an order for the service addresses of the set, said selecting being based at least in part on workload distribution, and wherein said selecting comprises:

                indexing the service addresses of the set in a chosen order providing a set of indices corresponding to the service addresses of the set; and

                determining an order for the plurality of indices, said order to represent the order of the service addresses of the set, wherein said determining comprises using an equation to determine the order, said equation being based at least in part on the number of said service addresses of said set and a node number of the specific node, and said equation ~~comprises~~ comprising:

                        [((node number)mod(number of said service addresses of the set)+k)mod(number of said service addresses of the set)], wherein mod is an integer remainder of a division operation, and k is set to a selected value.

23.   (Currently Amended) The method of claim 18, wherein said ordering criterion is based on distance from said <u>client</u> node to a plurality of servers corresponding to said plurality of service addresses.

24.   (Currently Amended) The method of claim 23, wherein said ordering criterion comprises a lowest distance from said <u>client</u> node to the plurality of servers.

25.   (Currently Amended) A system of providing ordered lists of service addresses, said system comprising:

       means for creating an ordered list of service addresses to be used by a <u>client</u> node of a computing environment to reach a service of said computing environment, said means for creating using a predefined equation to order a plurality of service addresses having the same ordering criterion, said predefined equation balancing use of said plurality of service addresses among said <u>client</u> node and at least one other <u>client</u> node of said computing environment; and

       means for using said ordered list by said <u>client</u> node to reach said service, wherein said ordered list is ordered specifically for said <u>client</u> node <u>based on one or more characteristics of the client node</u>.

26.   (Currently Amended) The system of claim 25, wherein said ordering criterion comprises distance from said <u>client</u> node to a plurality of servers corresponding to said plurality of service addresses.

27.   (Currently Amended) The system of claim 25, wherein said predefined equation is based at least in part on the number of said plurality of service addresses having the same ordering criterion and a node number of said <u>client</u> node.

28.   (Currently Amended) The system of claim 25, wherein said means for creating comprises means for ordering said service addresses based on distance from the <u>client</u> node to servers of said service addresses.

29.   (Previously Presented) The system of claim 28, wherein said means for ordering based on distance comprises means for ordering based on lowest distance.

30.   (Currently Amended) ~~The system of claim 25,~~ A system of providing ordered lists of service addresses, said system comprising:

means for creating an ordered list of service addresses to be used by a node of a computing environment to reach a service of said computing environment, said means for creating using a predefined equation to order a plurality of service addresses having the same ordering criterion, said predefined equation balancing use of said plurality of service addresses among said node and at least one other node of said computing environment, and ~~wherein~~ said predefined equation ~~comprises~~ comprising:

[(((a number of said node)mod(number of said plurality of service addresses having the same ordering criterion)+k)mod(number of said plurality of service addresses having the same ordering criterion)], wherein mod is an integer remainder of a division operation, and k is set to a selected value; and

means for using said ordered list by said node to reach said service, wherein said ordered list is ordered specifically for said node.

31.   (Previously Presented) The system of claim 30, wherein said predefined equation is computed a number of times, said number of times being equal to the number of said plurality of service addresses, and wherein k is incremented for each computation.

32.   (Previously Presented) The system of claim 30, wherein said same ordering criterion comprises equidistance from said node to a plurality of servers corresponding to said plurality of service addresses.

33.   (Previously Presented) The system of claim 32, wherein said means for creating further comprises means for ordering said service addresses based on distance from the node to servers of said service addresses.

34.   (Previously Presented) The system of claim 25, wherein said service comprises a system registry service.

35.   (Previously Presented) The system of claim 25, wherein said means for creating comprises using a distributed configuration manager of said computing environment.

36.   (Previously Presented) The system of claim 35, wherein said distributed configuration manager provides said ordered list to one or more nodes of said computing environment.

37.   (Previously Presented) The system of claim 25, further comprising means for maintaining said ordered list.

38.   (Previously Presented) The system of claim 37, wherein said means for maintaining comprises means for updating said ordered list in response to a change in the service addresses of said list.

39.   (Previously Presented) The system of claim 38, wherein said means for maintaining comprises using at least one distributed configuration manager of said computing environment.

40.   (Currently Amended) A system of providing ordered lists of service addresses, said system comprising:

means for ordering a list of a plurality of service addresses according to an ordering criterion, said ordered list being ordered for a specific <u>client</u> node <u>based on one or more characteristics of the client node</u>; and

for at least one set of service addresses of said plurality of service addresses having a same value for the ordering criterion, means for selecting an order for the service addresses of the set, the selecting being based at least in part on workload distribution.

41.   (Previously Presented) The system of claim 40, wherein said means for selecting comprises:

means for indexing the service addresses of the set in a chosen order providing a set of indices corresponding to the service addresses of the set; and

means for determining an order for the plurality of indices, said order to represent the order of the service addresses of the set.

42.   (Previously Presented) The system of claim 41, wherein the chosen order is ascending order of service addresses.

43.   (Currently Amended) The system of claim 41, wherein said means for determining comprises means for using an equation to determine the order, said equation being based at least in part on the number of said service addresses of said set and a node number of the specific <u>client</u> node.

44.   (Currently Amended) ~~The system of claim 43,~~ <u>A system of providing ordered lists of service addresses, said system comprising:</u>

means for ordering a list of a plurality of service addresses according to an ordering criterion, said ordered list being ordered for a specific node; and

for at least one set of service addresses of said plurality of service addresses having a same value for the ordering criterion, means for selecting an order for the service addresses of the set, the selecting being based at least in part on workload distribution, and wherein said means for selecting comprises:

means for indexing the service addresses of the set in a chosen order providing a set of indices corresponding to the service addresses of the set; and

means for determining an order for the plurality of indices, said order to represent the order of the service addresses of the set, wherein said means for determining comprises means for using an equation to determine the order, said equation being based at least in part on the number of said service addresses of said set and a node number of the specific node, and ~~wherein~~ said equation ~~comprises~~ comprising:

[((node number)mod(number of said service addresses of the set)+k)mod(number of said service addresses of the set)], wherein mod is an integer remainder of a division operation, and k is set to a selected value.

45.   (Previously Presented) The system of claim 40, wherein the ordering criterion is based on distance from said node to a plurality of servers corresponding to said plurality of service addresses.

46.   (Previously Presented) The system of claim 45, wherein the ordering criterion comprises a lowest distance from said node to the plurality of servers.

47.   (Currently Amended) A system of providing ordered lists of service addresses, said system comprising:

at least one node of a computing environment to create an ordered list of service addresses to be ordered specifically for and used by a <u>client</u> node of the computing environment to reach a service of said computing environment, the creating using a predefined equation <u>that takes into consideration one or more characteristics of the client node</u> to order a plurality of service addresses having the same ordering criterion, said predefined equation balancing use of said plurality of service addresses among said <u>client</u> node to use the ordered list and at least one other <u>client</u> node of said computing environment.

48.   (Currently Amended) A system of providing ordered lists of service addresses, said system comprising:

at least one node to order a list of a plurality of service addresses according to an ordering criterion, said ordered list being ordered for a specific <u>client</u> node <u>based on one or more characteristics of the client node</u>; and

at least one node to select, for at least one set of service addresses of said plurality of service addresses having a same value for the ordering criterion, an order for the service addresses of the set, the selecting being based at least in part on workload distribution.

49.   (Previously Presented) The system of claim 48, wherein said at least one node to order and said at least one node to select comprise the same at least one node.

50. (Previously Presented) The system of claim 48, wherein said at least one node to order is different from said at least one node to select.

51. (Currently Amended) At least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method of providing ordered lists of service addresses, said method comprising:

creating an ordered list of service addresses to be used by a client node of a computing environment to reach a service of said computing environment, said creating using a predefined equation to order a plurality of service addresses having the same ordering criterion, said predefined equation balancing use of said plurality of service addresses among said client node and at least one other client node of said computing environment; and

using said ordered list by said client node to reach said service, wherein said ordered list is ordered specifically for said client node based on one or more characteristics of the client node.

52. (Currently Amended) The at least one program storage device of claim 51, wherein said ordering criterion comprises distance from said client node to a plurality of servers corresponding to said plurality of service addresses.

53. (Currently Amended) The at least one program storage device of claim 51, wherein said predefined equation is based at least in part on the number of said plurality of service addresses having the same ordering criterion and a node number of said client node.

54. (Currently Amended) The at least one program storage device of claim 51, wherein said creating comprises ordering said service addresses based on distance from the client node to servers of said service addresses.

55.   (Previously Presented) The at least one program storage device of claim 54, wherein said ordering based on distance comprises ordering based on lowest distance.

56.   (Currently Amended) ~~The at least one program storage device of claim 51,~~ At least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method of providing ordered lists of service addresses, said method comprising:

creating an ordered list of service addresses to be used by a node of a computing environment to reach a service of said computing environment, said creating using a predefined equation to order a plurality of service addresses having the same ordering criterion, said predefined equation balancing use of said plurality of service addresses among said node and at least one other node of said computing environment, and ~~wherein~~ said predefined equation ~~comprises~~ comprising:

[(((a number of said node)mod(number of said plurality of service addresses having the same ordering criterion)+k)mod(number of said plurality of service addresses having the same ordering criterion)], wherein mod is an integer remainder of a division operation, and k is set to a selected value; and

using said ordered list by said node to reach said service, wherein said ordered list is ordered specifically for said node.

57.   (Previously Presented) The at least one program storage device of claim 56, wherein said predefined equation is computed a number of times, said number of times being equal to the number of said plurality of service addresses, and wherein k is incremented for each computation.

58. (Previously Presented) The at least one program storage device of claim 56, wherein said same ordering criterion comprises equidistance from said node to a plurality of servers corresponding to said plurality of service addresses.

59. (Previously Presented) The at least one program storage device of claim 58, wherein said creating further comprises ordering said service addresses based on distance from the node to servers of said service addresses.

60. (Previously Presented) The at least one program storage device of claim 51, wherein said service comprises a system registry service.

61. (Previously Presented) The at least one program storage device of claim 51, wherein said creating is performed by a distributed configuration manager of said computing environment.

62. (Previously Presented) The at least one program storage device of claim 61, wherein said distributed configuration manager provides said ordered list to one or more nodes of said computing environment.

63. (Previously Presented) The at least one program storage device of claim 51, wherein said method further comprises maintaining said ordered list.

64. (Previously Presented) The at least one program storage device of claim 63, wherein said maintaining comprises updating said ordered list in response to a change in the service addresses of said list.

65. (Previously Presented) The at least one program storage device of claim 64, wherein said maintaining is performed by at least one distributed configuration manager of said computing environment.

66.   (Currently Amended) At least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method of providing ordered lists of service addresses, said method comprising:

ordering a list of a plurality of service addresses according to an ordering criterion, said ordered list being ordered for a specific client node based on one or more characteristics of the client node; and

for at least one set of service addresses of said plurality of service addresses having a same value for the ordering criterion, selecting an order for the service addresses of the set, said selecting being based at least in part on workload distribution.

67.   (Previously Presented) The at least one program storage device of claim 66, wherein said selecting comprises:

indexing the service addresses of the set in a chosen order providing a set of indices corresponding to the service addresses of the set; and

determining an order for the plurality of indices, said order to represent the order of the service addresses of the set.

68.   (Previously Presented) The at least one program storage device of claim 67, wherein the chosen order is ascending order of service addresses.

69.   (Currently Amended) The at least one program storage device of claim 67, wherein said determining comprises using an equation to determine the order, said equation being based at least in part on the number of said service addresses of said set and a node number of the specific client node.

70.   (Currently Amended) ~~The at least one program storage device of claim 69,~~ At least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method of providing ordered lists of service addresses, said method comprising:

    ordering a list of a plurality of service addresses according to an ordering criterion, said ordered list being ordered for a specific node; and

    for at least one set of service addresses of said plurality of service addresses having a same value for the ordering criterion, selecting an order for the service addresses of the set, said selecting being based at least in part on workload distribution, and wherein said selecting comprises:

        indexing the service addresses of the set in a chosen order providing a set of indices corresponding to the service addresses of the set; and

        determining an order for the plurality of indices, said order to represent the order of the service addresses of the set, wherein said determining comprises using an equation to determine the order, said equation being based at least in part on the number of said service addresses of said set and a node number of the specific node, and ~~wherein~~ said equation ~~comprises~~ comprising:

            [((node number)mod(number of said service addresses of the set)+k)mod(number of said service addresses of the set)], wherein mod is an integer remainder of a division operation, and k is set to a selected value.

71.   (Previously Presented) The at least one program storage device of claim 66, wherein said ordering criterion is based on distance from said node to a plurality of servers corresponding to said plurality of service addresses.

72.   (Previously Presented) The at least one program storage device of claim 71, wherein said ordering criterion comprises a lowest distance from said node to the plurality of servers.